

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. (Withdrawn): A method of manufacturing a tire in which preset-beads each preformed by mounting a bead filler on a bead core are disposed radially outward of a carcass band and both side portions of the carcass band are turned around the preset beads to build the tire, wherein said preset bead is formed by winding and laminating a ribbon-shaped filler rubber radially outward of the bead core over several laps.

2. (Withdrawn): The method of manufacturing a tire according to claim 1, wherein the ribbon-shaped bead filler rubber is so directed that its thickness direction is aligned to the direction of the central axis of the bead core and the ribbon-shaped bead filler rubber is wound and laminated on a side face of a disk rotating about the central axis of the bead core.

3. (Currently Amended): An apparatus of forming a preset bead for use in a tire manufacturing method in which preset-beads each preformed by mounting a bead filler on a bead core are disposed radially outward of a carcass band and both side portions of the carcass band are turned around the preset beads to build the tire, wherein the preset bead is formed by winding and laminating a ribbon-shaped bead filler rubber radially outward of the bead core over several laps, said preset bead forming apparatus comprising:

a bead core-holding device for holding the bead core;

a disk integrally rotating with the bead core-holding device to wind and laminate said ribbon-shaped bead filler rubber on a disk surface;

an extruder extruding said ribbon-shaped bead filler rubber in accordance with its winding;

a ribbon-attaching roller displaceably provided on the disk surface of the disk and pressing the extruded ribbon-shaped bead filler rubber against the disk; and

a bead removing device configured to project perpendicularly ~~from through~~ the slits provided on the disk surface, and remove the preset bead from the disk,
wherein the bead removing device extends inwardly and outwardly in a radial direction.

4. (Previously Presented): The preset bead-forming apparatus according to claim 3, wherein the bead core-holding device is composed of magnets which attract and hold a side face of the bead core and a centering device which applies a force to an inner circumference face of the bead core attracted by the magnets to center the bead core, and said apparatus further comprises a ribbon-attaching roller position-controlling means controlling the position of said ribbon-attaching roller.

5. (Withdrawn): A system of forming a preset bead, comprising:
a preset bead-forming apparatus;
a bead core preparing station for preparing bead cores supplied to said preset bead-forming apparatus;
a preset bead storage station for temporarily storing the formed preset beads; and
a bead-handling robot for transferring the bead cores from the bead core-preparing station to the preset bead-forming apparatus as well as transferring the preset beads from the preset bead-forming apparatus to the preset bead storage station.

6. (Withdrawn): The preset bead-forming system according to claim 5, further comprising a system-controlling device for providing a direction of the size of the bead to be prepared to the bead core-preparing station and providing a direction of the size of the preset bead to be formed to the preset bead-forming device on the basis of the predetermined formation order of the preset bead, the order including at least a combination of the preset beads in different sizes which are mutually successive in the order.

7. (Withdrawn): The preset bead-forming system according to claim 5, further comprising a preset bead inspection station for determining whether the preset bead is good or

bad by measuring the weight and shape of the preset bead formed by the preset bead-forming system.

8. (Withdrawn): An apparatus of forming a preset bead for use in the tire manufacturing method according to claim 2, comprising:

- a bead core-holding device for holding the bead core;
- a disk integrally rotating with the bead core-holding device to wind and laminate a ribbon-shaped bead filler rubber on a disk surface;
- an extruder extruding said ribbon-shaped filler rubber in accordance with its winding; and
- a ribbon-attaching roller displaceably provided on the disk surface of the disk and pressing the extruded ribbon-shaped bead filler rubber against the disk.

9. (Withdrawn): The preset bead-forming apparatus according to claim 8, wherein the bead core-holding device is composed of magnets which attract and hold the side face of the bead core and a centering device which applies a force to an inner circumference face of the bead core attracted by the magnets to center the bead core, and said apparatus further comprises a ribbon-attaching roller position-controlling means controlling the position of said ribbon-attaching roller.

10. (Withdrawn): The preset bead-forming system according to claim 6, further comprising a preset bead inspection station for determining whether the preset bead is good or bad by measuring the weight and shape of the preset bead formed by the preset bead-forming system.

11. (Previously Presented): The apparatus of claim 3, further comprising:

- a second bead core-holding device for holding a second bead core ;
- a second disk integrally rotating with the second bead core-holding device and provided with a second disk surface;
- a base configured to support the disk and the second disk; and

a driving portion configured to rotate the base;

wherein the rotation of the base changes the positions of the disk and second disk such that the roller is provided on the second disk surface.

12. (Previously Presented): The apparatus according to claim 11, wherein the bead core-holding device is composed of magnets which attract and hold a side face of the bead core and a centering device which applies a force to an inner circumference face of the bead core attracted by the magnets to center the bead core, and said apparatus further comprises a ribbon-attaching roller position-controlling means controlling the position of said ribbon-attaching roller.

13. (New): The apparatus according to claim 3, wherein the bead removing device comprises a radial length substantially equal to a radial displacement of the ribbon-attaching roller.